

Recovery Plan Action Status

Plan Name: Recovery Plan *Mitracarpus maxwelliae*, *Mitracarpus polycladus*, and *Eugenia woodburyana* (3 spp.)

Plan Status: Final

Plan Date: 06-Oct-98

Lead Agency: USFWS

Lead Office: Caribbean Ecological Services Field Office

(487)
851-7297)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
No common name (<i>Mitracarpus maxwelliae</i>), No common name (<i>Mitracarpus polycladus</i>), No common name (<i>Eugenia woodburyana</i>)	1	111	Develop a management plan which provides for the protection and recovery of <i>Mitracarpus maxwelliae</i> , M. <i>Polycladus</i> and <i>Eugenia woodburyana</i> , for the Guanica Commonwealth Forest	Not Started	FY 1995 - FY 1999	FY 2011	U.S. Fish and Wildlife Service, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Management	Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	No cost anticipated
No common name (<i>Mitracarpus maxwelliae</i>), No common name (<i>Mitracarpus polycladus</i>), No common name (<i>Eugenia woodburyana</i>)	1	113	Protect privately-owned land.	Planned	FY 1995 - FY 1999	FY 2011	U.S. Fish and Wildlife Service, Puerto Rico Department of Natural and Environmental Resources	Acquisition: General, Management: General	Internal Administrative, Species Expert, Volunteer	Cost not known at present
No common name (<i>Mitracarpus maxwelliae</i>), No common name (<i>Mitracarpus polycladus</i>), No common name (<i>Eugenia woodburyana</i>)	1	121	Monitor known populations.	Ongoing Current	FY 2008	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: General, Research: Population Assessment	Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	USFWS, DNER and volunteers performed this action
No common name (<i>Mitracarpus maxwelliae</i>), No common name (<i>Mitracarpus polycladus</i>), No common name (<i>Eugenia woodburyana</i>)	1	122	Enforce existing Commonwealth and Federal endangered species regulations.	Ongoing Current	FY 1995 - FY 1999	FY 2011	U.S. Fish and Wildlife Service, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Other: Law Enforcement, Other: Regulations	Internal Field Assistance	DNER Performs these actions

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No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	123	Educate the public on plant conservation values and regulations.	Ongoing Current	FY 1995 - FY 1999	FY 2011	U.S. Fish and Wildlife Service, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Other: Information and Education	Internal Administrative, Internal Field Assistance, Volunteer	Species included in public education programs
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	212	Characterize sites to determine their suitability as future recovery sites.	Planned	FY 2010	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Management: Land Use, Management: Predator and Competitor Control, Research: Climate Change, Research: Competition, Research: Habitat Status	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	221	Identify and inventory potential sites.	Ongoing Current	FY 2007	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: General, Research: Habitat Requirements, Research: Habitat Status	Graduate Student, Internal Field Assistance, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	31	Define habitat requirements.	Not Started			U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: Habitat Requirements, Research: Reintroduction	Graduate Student, Internal Administrative, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	321	Assess periodicity of flowering.	Partially Complete	FY 2007	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: Demographic Studies, Research: Propagation	Graduate Student, Internal Field Assistance, Species Expert, Volunteer	6K/year includes 321, 322, 323, 324, and 325. Action Duration 2-4 yrs. This action is performing by UPR-Rio Piedras

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No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	322	Assess seed production and dispersal.	Partially Complete	FY 2007	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: Competition, Research: Habitat Requirements, Research: Propagation	Contract, Graduate Student, Internal Technical Assistance, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	323	Evaluate seed viability and germination requirements.	Partially Complete	FY 2007	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: General, Research: Habitat Requirements, Research: Propagation	Contract, Graduate Student, Internal Technical Assistance, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	324	Evaluate requirements for establishment and growth.	Partially Complete	FY 2007	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Management: Habitat Maintenance and Manipulation, Research: Habitat Requirements, Research: Reintroduction	Contract, Graduate Student, Internal Technical Assistance, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	325	Determine genetic structure of the species.	Not Started			U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: Genetics	Contract, Graduate Student, Internal Administrative, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	331	Assess methods of propagation.	Ongoing Not Current	FY 2007	FY 2011	Botanical Gardens, U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: Habitat Requirements, Research: Propagation	Contract, Graduate Student, Internal Technical Assistance, Species Expert, Volunteer	Action Duration 2-4 yrs.

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No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	332	Develop artificial propagation program.	Planned	FY 2008	FY 2011	Botanical Gardens, U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Management: Propagation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	USFWS and DNER lead this effort
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	412	Ensure site protection.	Partially Complete	FY 1995 - FY 1999	FY 2011	U.S. Fish and Wildlife Service, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Acquisition: Exchange, Acquisition: Management Agreement, Management: Other, Other: Law Enforcement, Other: Regulations	Internal Administrative, Internal Field Assistance, Internal Technical Assistance	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	413	Introduce plants.	Ongoing Current	FY 2008	FY 2011	U.S. Fish and Wildlife Service, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Acquisition: Lease, Management: Propagation, Management: Reintroduction	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	441	Select sites and assess habitat suitability.	Ongoing Current	FY 2008	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Research: General, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	USFWS and DNER lead this effort. Action Duration 2-4 yrs.
No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	51	Determine number of individuals and populations to ensure stability and self-perpetuation.	Not Started			U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Acquisition: Exchange, Research: Other Information, Research: Population Assessment, Research: Propagation	Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	

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No common name (Mitracarpus maxwelliae), No common name (Mitracarpus polycladus), No common name (Eugenia woodburyana)	2	52	Determine what additional actions are needed to achieve recovery objectives.	Ongoing Current	FY 2008	FY 2011	U.S. Fish and Wildlife Service, Universities, Puerto Rico Department of Natural and Environmental Resources, U.S. Fish and Wildlife Service, Refuge Division	Management: General, Other: Administration, Research	Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert	